

### **REMARKS/ARGUMENTS**

This Amendment and the following remarks are intended to fully respond to the office action mailed March 23, 2007. In that Office Action claims 1-13, 15-23, and 31-33 were examined, and all claims were rejected. More specifically, claims 1-13, 15-23, and 31-33 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention; and claims 1-13, 15-23, and 31-33 were rejected under 35 U.S.C. § 103(a) as being obvious over Gamache et al. (USPN 6938084), in view of Williams et al. (USPN 2003/0079100A1). Reconsideration of these rejections, as they might apply to the original and amended claims in view of these remarks, is respectfully requested.

In this Response, claims 1-3, 6-8, 10, 11, 16, 17, 23, and 31 have been amended. Claims 4, 5, and 12-15 have been canceled, new claims 34-42 have been added.

#### **Claim Rejections – 35 U.S.C. § 112**

Claims 1-13, 15-23, and 31-33 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the office action objects to the language “higher precedence” in claims 1, 16, and 31. Also, the office action objects to the phrase “the same” in claim 15. The claims have been amended to address these rejections.

In claims 1, 16, and 31, the phrase “a higher precedence” has been replaced with the phrase “precedence over.” Claim 15 has been canceled. Based on these changes, Applicants request the withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

#### **Claim Rejections – 35 U.S.C. § 103**

Claims 1-13, 15-23, and 31-33 were rejected under 35 U.S.C. § 103(a) as being obvious over Gamache et al. (USPN 6938084) hereinafter “Gamache,” in view of Williams et al. (USPN 2003/0079100A1), hereinafter “Williams.” Applicants respectfully traverse this rejection because the combination of references fails to teach all the elements of the claims, and in particular maintaining fence values unchanged.

In addition to the amendments described above, claims 1-3, 6-8, 10, 11, 16, 17, 23, and 31 have been further amended to reword some language within the claims. The additional

amendments have not been made for purposes of patentability and are not intended to limit the scope of the claims. New claim 34 is a method claim that includes similar limitations as claim 1. Claims 33-42 depend upon new claim 34.

The office action alleges that Williams discloses all the elements of claim 1, except that Williams “does not describe the limitation of determining whether the first fence is of higher precedence than the second fence value; and updating the resource residing on the second machine based on the determining.” *Office Action (3/23/07)* at page 6. The office action cites Gamache to compensate for the noted deficiency in Williams. *See id.* However, as described below, Gamache does not disclose the use of fence values as claimed in claims 1 and 34.

Gamache describes a method and system for organizing a cluster of servers. The method includes storing cluster operation data on at least three replicas, which are independent from any given server. The cluster operates as long as at least one server maintains a majority of the replicas storing the cluster operational data. Gamache describes a replication process by which the most up to date replica, based on an epoch number, propagates changes to the other replica members. The epoch numbers are associated with a recovery process in which each replica is updated to include the latest changes, after which an epoch number is incremented. In other words, epoch numbers are associated with local changes to the content of a replica.

Claim 1 and new claim 34 recite, *inter alia*, “changing the second other meta-data to indicate a change in the content of the second member and maintaining the second fence value unchanged.” Gamache does not disclose this element of claim 1. Instead, Gamache teaches that during the recovery process, when epoch numbers are compared to determine a leader, an epoch value is changed by adding one to the maximum epoch value among the replicas. Gamache states:

Step 1502 of FIG. 15A is thus executed following the various log initialization operations of FIGS. 16A-16B. Based upon the epoch numbers recorded in the header of each of the available replicas, a maximum epoch number is determined at step 1502. **A current replica epoch is established by adding one to the maximum at step 1504, and the current replica epoch is written to the log headers on all the replicas in the availability set such that they are updated to the current replica epoch.** Note that although not specifically shown, a write failure results in the abort recovery process of FIG. 18 being executed.

*Gamache*, col. 24, lines 34-45 (emphasis added). Accordingly, *Gamache* teaches that when epoch numbers are used to propagate changes to other replicas, the epoch numbers are changed, i.e., incremented by 1. For this reason, use of epoch numbers is not the same as the use of fence values, recited in the claims. Claims 1 and 34 recite that fence values are maintained “unchanged.” *Gamache* therefore fails to compensate for the deficiency in *Williams*, and the combination of *Gamache* and *Williams* fail to teach all the elements of claim 1. Claims 2, 3, 6-8, 10, and 11 depend upon claim 1 and are patentable for at least the same reasons.

Claim 16 is directed to a computer storage medium and recites “maintaining the fence value of the first resource and the fence value of the second resource unchanged.” As noted above, the office action concedes that *Williams* fails to teach the use of fence values, and *Gamache* fails to compensate for the deficiency in *Williams*. *Gamache* teaches the use of epoch numbers, which are updated or changed each time they are used in a recovery process and therefore are not the same as the claimed fence values, which are maintained unchanged. Claim 16 is therefore patentable over the combination of *Williams* and *Gamache*. Claims 17-23 depend upon claim 16 and are patentable for at least the same reasons.

Claim 31, recites a system with machines that are configured, *inter alia*, to update “the resource on the machines based on data other than the fence values, wherein the fence values are maintained unchanged.” The combination of *Williams* and *Gamache* fail to teach a system that utilizes fence values that are maintained unchanged when resources are updated. Claims 32 and 33 depend upon claim 31 and are patentable for at least the same reasons.

### Conclusion

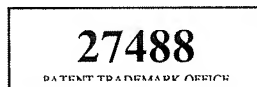
This Amendment fully responds to the office action mailed on March 23, 2007. Still, that Office Action may contain arguments and rejections that are not directly addressed by this Amendment because they are rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Amendment to directly address an argument raised in the Office Action should not be taken as an indication that the Applicant believes the argument has merit. Furthermore, the claims of the present application may include other elements, not discussed in this Amendment, which are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

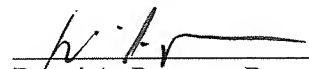
It is believed that no further fees are due with this Amendment. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

In light of the above remarks and amendments, it is believed that the application is now in condition for allowance and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

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